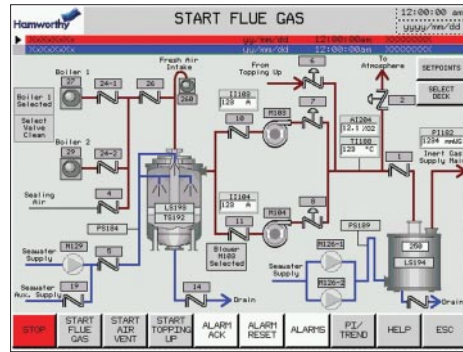


Moss Flue Gas System

Inert Gas Systems



Venturi type scrubber



Typical picture of the touch screen user interface

Moss flue gas system

The unique design is based on experience from thousands of installations, the first one in the 1960's. High efficiency, low maintenance costs, safe and easy operation combined with minimum space requirements are important features of the Moss design. This is reflected in the overall layout, the choice of materials/corrosion protection and the control system.

Special features

Moss Scrubber Unit

The Moss scrubber unit is combining three scrubbing principles; a venturi scrubber, a wet filter and a spray section for high efficiency cooling and cleaning of boiler flue gases. Concentric arrangement with demister section and mesh type wet filter gives independence of ships pitching and rolling without loss of efficiency. The scrubber unit is internally GRP coated and venturi tube in corrosion and heat resistant steel. Boiler uptake valves are of butterfly type and of heat resistance material. Air sealing and soot blowing devices are provided.

Blower Units

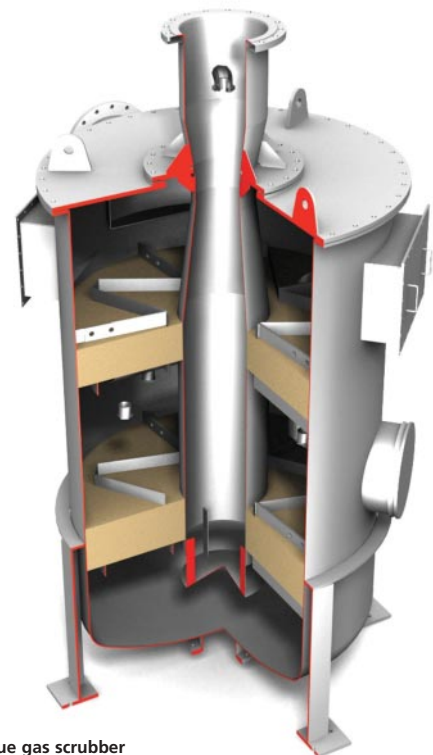
The blower units are of a single stage centrifugal type with motors and each unit is arranged on a rigid steel base frame equipped with resilient mountings. The blower house is of mild steel and internally GRP coated. The impeller is manufactured from corrosion resistant steel.

Moss Deck Water Seal

The Moss deck water seal is of displacement semi-dry type internally GRP coated. Upon loss of positive flow, the water will immediately close the seal. The mesh demister is effectively preventing carry-over of water droplets under all flow conditions.

Moss Pressure/Vacuum Breaker

The Moss Pressure/Vacuum Breaker is another device of importance for the ship's safety, releasing excessive pressure or vacuum from the cargo tanks. The unit is internally coated with epoxy.



The Moss flue gas scrubber

Control System

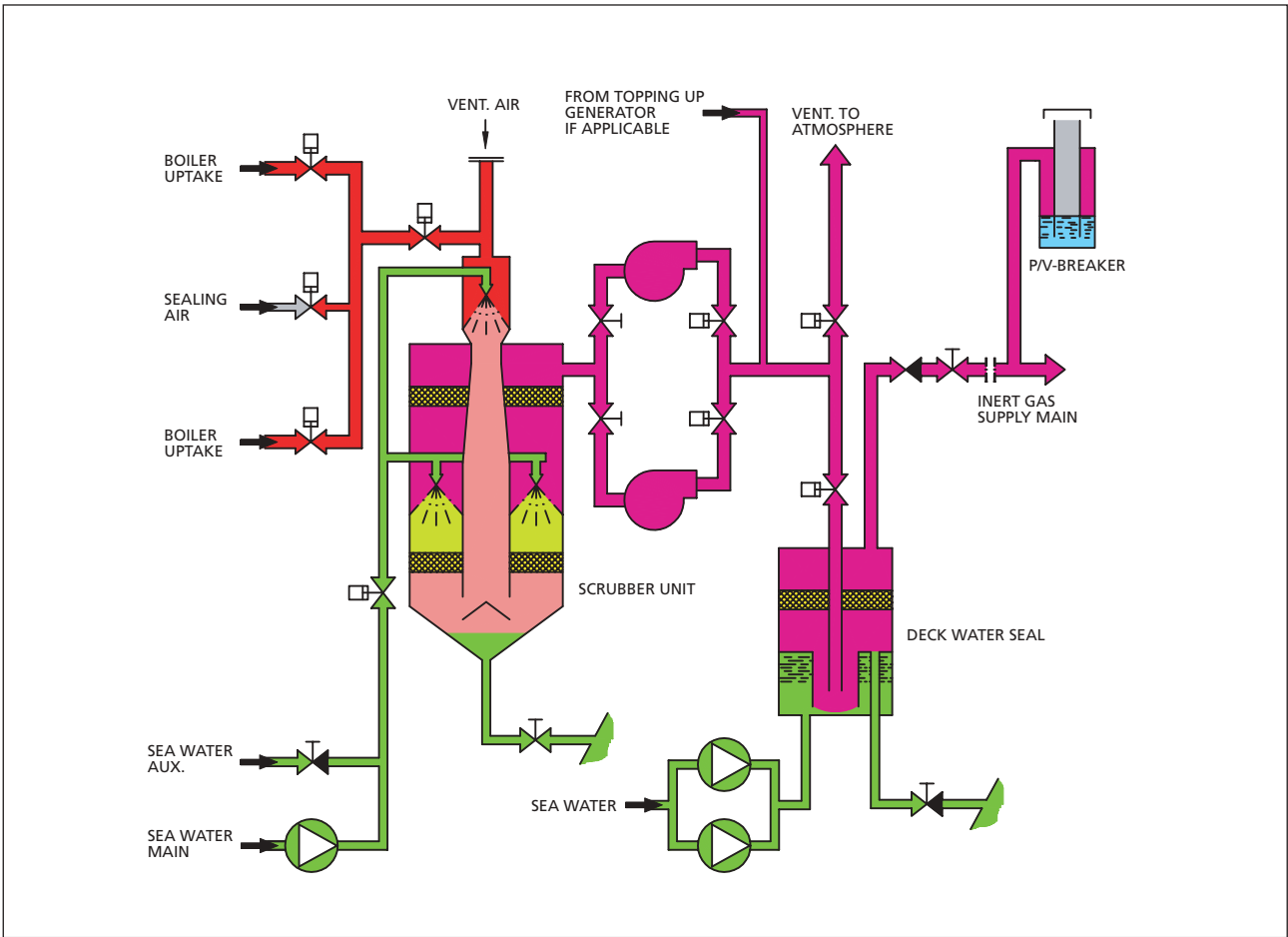
The control system is based on a Programmable Logical Control (PLC). The control panel is of the touch screen type. Several mimic flow diagrams are implemented as well as the controls required for safe and easy operation with a minimum of operator supervision. Additional functions like user manuals and condition monitoring can also be included.

The capacity is remotely controlled from a panel in the cargo control room.

The Moss Flue Gas System is designed based on compact modules, offering valuable savings in space and installation costs both for new buildings and for retrofit on existing vessels.

Moss Topping Up Generator

A Moss Topping up Generator, typically 500 Nm³/h, can be provided as optional equipment. This makes start-up of boilers unnecessary, if only small quantities of inert gas are required.



Performance data

Capacity: up to 30.000 Nm³/h

Basic flue gas composition:

O₂ - content: Approx. 5% by vol.
 CO₂ - content: Approx. 13% by vol.
 SO₂ - content: Approx. 3000 ppm.
 N₂ - content: Balance

Inert gas composition:

O₂ - content: No change
 CO₂ - content: No change
 SO₂ - content: Less than 100 ppm
 N₂ - content: Balance

Efficiency of soot extraction equal to or higher than 99% of particles above 1 micron.

Gas outlet temperature:

Max. 5°C above sea water temperature.

Relative humidity: 100%

Carry over of water droplets:

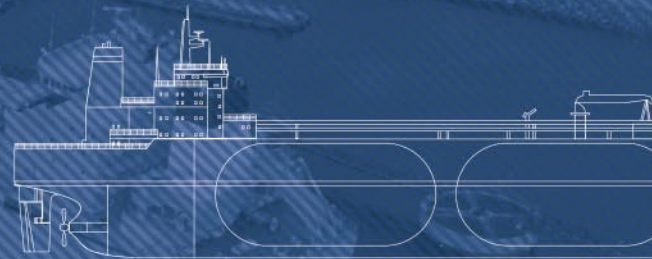
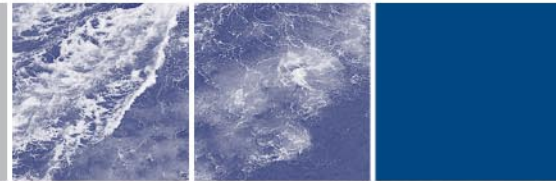
Less than 1 g/kg dry gas.

Nominal sea water consumption:

0,015 m³/Nm³ gas (sea water temp. 32°C).

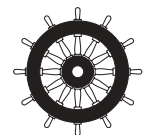
Nominal el. power consumption:

0,008 kW/Nm³/h gas (excluding sea water pumps).



Worldwide sales and service network

Our global network of sales and service centres ensures that we can provide first class technical, spares and service support to our customers wherever they are around the world. In addition to our sales and service locations, we are supported by agent representatives in all major shipping areas.



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The manufacturers reserve the right to alter the specification and data to incorporate improvements in design. Certified drawings will be issued on request.

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